REMARKS

The Examiner objected to informalities of the Specification, particularly the deficiencies on page 2, line 10, on page 13, line 14, on page 14, line 1, and on line 11 of claim 22. The Specification has been amended to address these deficiencies. Claim 22 has also been amended to address the Examiner's objection thereof. Figure 4 has been amended to address the Examiner's objection. Such amendment adds no new matter and a copy of amended Figure 4 is attached to this response.

Claims 1, 32, 33, 50, 51, 65, 66, 83, 84, 98, 99, 116, and 117 were rejected under 35 U.S.C. 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In response to this rejection, claims 1, 32, 33, 50, 41, 65, 66, 83, 84, 98, 99, 116, and 117 have been amended. Claim 63 was rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements. In response thereto, claim 63 was amended. Claims 30, 48, and 63 were objected to under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In response thereto, claims 30, 48, and 63 have been amended.

Claims 1, 3, 21, and 22 were rejected under 35 U.S.C. 103(a) as being unpatentable over Feuerstraeter et al. (USPN 6,285,659) in view of Cochennec (USPN 4,417,333). Claim 2 was rejected under 35 U.S.C. 103(a) as being unpatentable over Feuerstraeter et al. in view of Cochennec and in further view of Mills (USPN 5,991,303). Claims 4 and 5 were rejected under 35 U.S.C. 103(a) as being unpatentable over Feuerstraeter et al. in view of Cochennec and in further view of Wakeley et al (USPN

6,198,727). Claims 30, 31, 32, 33, 38, 39, 40, and 41 were rejected under 35 U.S.C. 103(a) as being unpatentable over Feuerstraeter et al. in view of Wakeley et al. Claims 34, 35, 43, 44, and 46 were rejected under 35 U.S.C. 103(a) as being unpatentable over Feuerstraeter et al. in view of Wakeley et al., and further in view of Mills. Claims 36 and 37 were rejected under 35 U.S.C. 103(a) as being unpatentable over Feuerstraeter et al. in view of Wakeley et al., and further in view of IEEE 802.3u-1995. Claim 42 was rejected under 35 U.S.C. 103(a) as being unpatentable over Feuerstraeter et al. in view of Wakeley et al. and further in view of Crayford (USPN 5,432,775).

Claims 45 and 47 were rejected under 35 U.S.C. 103(a) as being unpatentable over Feuerstraeter et al. in view of Wakeley et al. and further in view of Mills and Crayford. Claims 48, 49, 50, 51, 54, 55, and 57 were rejected under 35 U.S.C. 103(a) as being unpatentable over Feuerstraeter et al. in view of Wakeley et al. in further view of IEEE 802.3u-1995. Claims 52, 53, 58, 59, and 61 were rejected under 35 U.S.C. 103(a) as being unpatentable over Feuerstraeter et al. in view of Wakeley et al. in further view of Mills. Claims 63-66 and 69-74 were rejected under 35 U.S.C. 103(a) as being unpatentable over Feuerstraeter et al. in view of IEEE 802.3u-1995. Claims 67, 68, 76, 77, and 79 were rejected under 35 U.S.C. 103(a) as being unpatentable over Feuerstraeter et al. in view of IEEE 802.3u-1995, and further in view of Mills.

Claim 75 is rejected under 35 U.S.C. 103(a) as being unpatentable over Feuerstraeter et al. in view of IEEE 802.3u-1995 and further in view of Crayford. Claims 78 and 80 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feuerstraeter et al. in view of IEEE 802.3u-1995 and further in view of Mills, and further in view of Crayford. Claims 81-84, 87, 88, and 90 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Feuerstraeter et al. in view of IEEE 802.3u-1995. Claims 85, 86, 91, 92, and 94 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feuerstraeter et al. in view of IEEE 802.3u-1995 and further in view of Mills. Claims 96-99 and 104-107 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feuerstraeter et al. Claims 100, 101, 109, 110, and 112 were rejected under 35 U.S.C. 103(a) as being unpatentable over Feuerstraeter et al. in view of Mills.

Claims 102 and 103 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feuerstraeter et al. in view of IEEE 802.3u-1995. Claim 108 was rejected under 35 U.S.C. 103(a) as being unpatentable over Feuerstraeter et al. in view of Crayford. Claims 111 and 113 were rejected under 35 U.S.C. 103(a) as being unpatentable over Feuerstraeter et al. in view of Mills, and further in view of Crayford. Claims 114-117, 120, 121, and 123 were rejected under 35 U.S.C. 103(a) as being unpatentable over Feuerstraeter et al. in view of Wakely and in further view of IEEE 802.3u-1995. Claims 118, 119, 124, 125, and 127 were rejected under 35 U.S.C. 103(a) as being unpatentable over Feuerstraeter et al. in view of IEEE 802.3u-1995 and further in view of Mills.

In the Action, it was also indicated that claims 56, 60, 62, 89, 93, 95, 122, 126, and 128 are objected to as being dependent upon a rejected base claims, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claim. The applicant thanks the Examiner for this indication.

The prior art rejections are respectfully traversed. Additionally, independent claims 1, 21, 22, 30, 48, 63, 81, 96, and 114 have been amended to more particularly claim the patentable subject matter of the present invention. Moreover, new claims 129-140 have been added to claim further aspects of the present invention.

In understanding why the pending claims are patentable it is helpful to understand the problems that the claimed invention solves that are not even addressed, much less solved by the cited prior art references. One particular problem addressed and solved by the present invention as claimed relates to wired link partners that support link parameter negotiation, e.g., Ethernet auto negotiation operations. This problem occurs when link partners negotiate for a link speed (or other commonly supported link parameters) that is not supportable by the link coupling the link partners. Particularly, this problem may be encountered within Ethernet systems when link partners are each capable of establishing a link at 1000 Mbps. However, the media coupling the link partners does not support the establishment of a 1000 Mbps link between the link partners (although it is able to support a link between link partners at 100 Mbps and/or 10 Mbps).

During link negotiations, the link partners negotiate link parameters that include a link speed of 1000 Mbps. Such negotiation is possible because the negotiation is performed at 10 Mbps. After negotiation is complete, the link partners attempt to establish a link at 1000 Mbps. However, the link is established at 1000 Mbps only when link establishment criteria are met, e.g., initializing respective descramblers of the link partners. Because the media coupling the link partners cannot support 1000 Mbps operations, the link partners cannot establish the link at 1000 Mbps and, because of this, re-enter negotiation operations. The re-entered negotiation operations cause the link partners to again determine that a link will be attempted at 1000 Mbps. The link partners again fail to establish a link at 1000. These operations result in an endless loop of negotiation and link establishment failure with no external indication as to why the link cannot be established. Only manual intervention can overcome this problem.

Feuerstraeter et al., which serves as the primary reference in all rejections of the pending claims of the present invention solves a different problem. In contradistinction to the teachings of the present invention as claimed, Feuerstraeter et al. characterizes the quality of a communication link after it has been established. In particular, Feuerstraeter et al. considers the "total number of errors or the error rate or other measure of erroneous transmission or reception" of the established link. (Feuerstraeter et al. col. 6, lines 45-47) Thus, not only does Feuerstraeter et al. fail to disclose the teachings of the present invention, it wholly fails to even address the particular problems solved by the present invention as claimed.

The other cited references fail to overcome the shortcomings of Feuerstraeter et al. For example, Cochennec teaches that a failed link "may be the absence of the clock, an excessive error rate, a loss of locking, etc." (Cochennec col. 5, lines 20-22). While Cochennec provides alternate criteria for determining when a link has failed, it fails to overcome the shortcomings of Feuerstraeter et al. in rendering obvious the pending claims in the present invention. As stated above, the problem solved by the present invention is one that is particular to systems in which link partners negotiate link parameters, e.g., link rate, etc., and the problems resulting from such operation. The cited references are concerned with characterizing a link once it has been established. Thus, none of the cited references, either singularly or in combination solves the problems overcome by the present invention as claimed.

For example, claim 1 in its currently pending form is directed toward a method for establishing a link between network devices. Claim 1 requires (i) a first network device transmitting a first message advertising a first set of capabilities to a second network

device; (ii) the first network device negotiating with the second network device to determine a first link speed based upon the first set of capabilities; (iii) the first network device attempting to establish a link at the first link speed with the second network device; (iv) the first network device failing to establish a link at the first link speed with the second network device; (v) the first network device downgrading the first set of capabilities to a second set of capabilities, wherein the second set of capabilities does not include the first link speed; (vi) the first network device transmitting a second message advertising the second set of capabilities to the second network device; (vii) the first network device negotiating with the second network device to determine a second link speed that is less than the first link speed; (vii) the first network device and the second network device establishing a link at the second link speed; and (viii) the first network device transmitting data to the second network device via the link at the second link speed. The cited references do not disclose this combination of elements. Similarly, pending independent claims 21, 22, 30, 48, 63, 81, 96, 114, 129, and 132 include structural and/or operational limitations addressing this same problem. For these reasons, such claims and all claims dependent there from are allowable over the cited references.
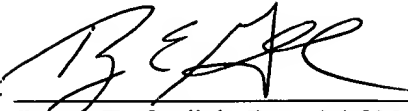
New claims 135, 138, and claims dependent there from solve this problem as well as at least one additional problem. The additional problem(s) occurs when link partners have negotiated a link at a link speed that is commensurate with the media that services the link, established the link at the negotiated link speed, and then the link fails. Because the failure of the link may be caused by the replacement of the media servicing the link, it would be desirable to attempt to establish a new link at a greatest commonly supported link speed. New claims 135 and 138 are directed toward solving this problem. In

particular, claim 135 is directed toward a method for servicing communications between a first wired Ethernet device and a second wired Ethernet device that couple via a wired link. The method includes (i) the first wired Ethernet device negotiating with the second wired Ethernet device to determine that link establishment will be attempted at the first supported link speed; (ii) the first wired Ethernet device and the second wired Ethernet device failing to establish a link at the first supported link speed; (iii) the first wired Ethernet device negotiating with the second wired Ethernet device to determine that link establishment will be attempted at the second supported link speed; (iv) the first wired Ethernet device and the second wired Ethernet device establishing a link at the second supported link speed; (v) the first wired Ethernet device and the second wired Ethernet device exchanging data at the second supported link speed; and (vi) in response to a failure of the link at the second supported link speed: (a) the first wired Ethernet device negotiating with the second wired Ethernet device to determine that link establishment will be attempted at the first supported link speed; and (b) the first wired Ethernet device and the second wired Ethernet device attempting to establish a link at the first supported link speed. Thus, with the limitations of new claims 135 and 138, upon the satisfaction of these conditions, the most recently problem cited above is solved. The cited references not only fail to disclose this combination of elements, they fail to even address the problem solved by new claim 135 (and also new claim 138).

For the above-provided reasons, all claims are now allowable and a notice of allowance is courteously solicited. The undersigned attorney is more than willing to discuss the merits of the present application with the Examiner if the Examiner so desires. Please call at the number provided below.

Respectfully submitted,

Date: January 21, 2003

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Specification:

The paragraph beginning at page 2, line 7, has been amended as follows:

As a result modern communications standards and systems have to accommodate communications between systems that have disparate technology (i.e. communicate at different speeds). In addition, it would be preferable to address the communications issues between these disparate technologies in an[d] automated way without the need for human intervention such as toggling or modifying switch settings. Finally, it is preferable that this function be handled at the lowest possible level of the communications process. For example, using the Open System Interconnect (OSI) reference model layers of physical layer, data link layer, network layer, transport layer, session layer, presentation layer and applications layer. It would be preferable to place the functionality for addressing these disparate technologies at the lowest possible layer, such as the physical layer. Placing the functionality at this layer would open the higher layers to handling other functions and thereby improve the overall performance of the system.

The paragraph beginning at page 13, line 7, has been amended as follows:

The two link partners then attempt to make a link as shown in 506. If the link is successful as shown at 508, the link is established as shown in 512 and there is an end to the auto-negotiation process as shown in 514. When the link is established at 512, the link partners are able to communicate with each other, using the appropriate communication parameters. However, even after the link has been established, the link can still go down or fail as shown at 516. Should this happen, the system would re-advertise the full set of

capabilities as shown by the loop back at 526. Should the link fail when attempting to establish communications as shown at <u>510</u> [506], a link fail counter is increased by one as shown at 518. A test is then made at 520 to determine if the count equals a predefined number (N). The predefined number represents the number of attempts that the link partner should make before there is a downgrade in the set of capabilities advertised by the initiating partner.

In Table 1 on page 14, the paragraph beginning on line 12 has been amended as follows:

adv_baset	10BASET advertisement variable – [contiains] <u>contains</u> information on the 10BASET capability set. In the method of the present invention adv_baset is loaded from registers 5 & 6 of state variable mr_adv_ability as follows, adv_baset ⇐ mr_adv_ability [5] + mr_adv_ability [6]

<u>In the Abstract:</u>

The Abstract on page 30 has been amended as follows:

ABSTRACT

Auto-negotiation with a communication partner includes downgrading a set of advertised communications capabilities, e.g., IEEE 802.3 capabilities, when a link with the communication partners fails to support an advertised communications capability, e.g., wire-speed. One operation includes: (1) advertising a first set of communications capabilities; (2) arriving at a first common set of communications capabilities based upon the first set of communications capabilities; (3) attempting to establish a link according to

the first common set of communications capabilities; (4) failing to establish a[t] link according to the first common set of communications capabilities; (5) downgrading the first set of communications capabilities to a second set of communications capabilities; (6) advertising the second set of communications capabilities; (6) arriving at a second common set of communications capabilities according to the second common set of communications capabilities; and (7) attempting to establish a link according to the second common set of communications capabilities.

In the Claims:

Claims 1, 21, 22, 30, 32, 33, 48, 50, 51, 63, 65, 66, 81, 83, 84, 96, 98, 99, 114, 116, and 117 have been amended as indicated:

1. (Amended) A method for establishing a link between network devices comprising the steps of:

a first network device transmitting a first message advertising a first set of capabilities to a second network device;

the first network device negotiating with the second network device to determine a first link speed based upon the first set of capabilities;

the first network device attempting to establish a link [according to] at the first link speed with the second network device [set of capabilities];

the first network device failing to establish a link [according to] at the first link speed with the second network device [set of capabilities];

the first network device downgrading the first set of capabilities to a second set of capabilities, wherein the second set of capabilities does not include the first link speed;

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the first network device transmitting a second message advertising the second set of capabilities to the second network device;

the first network device negotiating with the second network device to determine a second link speed that is less than the first link speed;

the first network device and the second network device establishing a link at the second link speed; and

the first network device transmitting data to the second network device via the link at the second link speed.

[transmitting a second message advertising the second set of capabilities; and

attempting to establish a link according to the second set of capabilities.]

21.   (Amended) A method for operating a pair of local area network devices to establish a link, the method comprising:

the pair of local area network devices determining a set of commonly supported operating parameters by performing auto negotiation operations, the commonly supported operating parameters including a first link speed;

the pair of local area network devices attempting to establish a link according to the set of commonly supported operating parameters; and

when the attempt to establish the link according to the set of commonly supported operating parameters fails:

[,] the pair of local area network devices auto negotiating to determine [ing] a reduced set of commonly supported operating parameters, the reduced set of

commonly supported operating parameters including a second link speed that is less than the first link speed; [and]

the pair of local area network devices [attempting to] establishing a link according to the reduced set of commonly supported operating parameters at the second link speed; and

the pair of local area network devices exchanging data at the second link speed.

22.   (Amended) A method for operating a pair of local area network devices to establish a link, the method comprising:

a first local area network device of the pair of local area network devices advertising a first local area network device set of supported operating parameters;

a second local area network device of the pair of local area network devices advertising a second local area network device set of supported operating parameters;

the first local area network device and the second local area network device negotiating a set of commonly supported operating parameters from the first local area network device set of supported operating parameters and the second local area network device set of supported operating parameters;

the pair of local area network devices attempting to establish a link according to the set of commonly supported operating parameters; and

when the attempt to establish the link according to the set of commonly supported operating parameters fails:

the first local area network device of the pair of local area network devices advertising a reduced first local area network device set of operating parameters;

the pair of local area network devices determining a reduced set of commonly supported operating parameters from the reduced first local area network device set of operating parameters and the second local area network device set of operating parameters; [and]

the pair of local area network devices [attempting to] establishing a link according to the reduced set of commonly supported operating parameters; and

the pair of local area network devices exchanging data according to the reduced set of commonly supported operating parameters.

30. (Amended) A semiconductor component that communicates via a wired Ethernet link with a communication device supporting two or more communication rates, the semiconductor component comprising:

Ethernet transceiver circuitry that supports communication at a plurality of rates;

[a first advertisement comprising a first indication of at least one of the plurality of rates;]

the Ethernet transceiver circuitry sending [the] a first advertisement including a first indication of at least one of the plurality of rates to the communication device;

the Ethernet transceiver circuitry attempts to establish [communication] a link with the communication device at a first rate that conforms to the first advertisement, the first rate having a corresponding counterpart in the two or more communication rates of the communication device;

the Ethernet transceiver circuitry failing to establish the link with the communication device at the first rate;

[a second advertisement comprising a second indication of at least one of the plurality of rates, the second indication differing from the first indication, the second advertisement constructed based upon a result of the attempt to establish communication at the first rate;]

the Ethernet transceiver circuitry sending [the] a second advertisement to the communication device, wherein the second advertisement includes a second indication of at least one of the plurality of rates, the second indication differing from the first indication, the second advertisement constructed based upon the failure of the attempt to establish the link with the communication device at the first rate; [and]

the Ethernet transceiver circuitry [attempts to] establishing a link with the communication device at the [communication at a] second rate that conforms to the second advertisement, the second rate having a corresponding counterpart in the two or more communication rates of the communication device; and

the Ethernet transceiver circuitry communicating data to the communication device via the link at the second rate.

32.   (Amended) The semiconductor component of claim 30, further comprising a protocol that governs communication over the wired Ethernet link, and the protocol being based on IEEE 802.3-2000.

33.　(Amended) The semiconductor component of claim 32, wherein the first advertisement and the second advertisement do not conflict with IEEE 802.3-2000.

48.　(Amended) A semiconductor component that communicates via a wired Ethernet link with a communication device supporting two or more rates, the semiconductor component comprising:

Ethernet transceiver circuitry that supports communication at a plurality of rates;

the Ethernet transceiver circuitry producing a first indication that identifies the plurality of rates;

the Ethernet transceiver circuitry sending the first indication to the communication device via the wired Ethernet link;

the Ethernet transceiver circuitry attempts to establish a communication link at a first rate consistent with the first indication and having a corresponding counterpart in the two or more rates of the communication device;

the Ethernet transceiver circuitry failing to establish the communication link at the first rate;

the Ethernet transceiver circuitry sending a second indication to the communication device [upon a failure to establish acceptable communication at the first rate], the second indication identifying at least one of the plurality of rates but not the first rate; [and]

the Ethernet transceiver circuitry [attempts to] establishing a communication link with the communication device at a second rate consistent with the second indication and

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having a corresponding counterpart in the two or more rates of the communication device;

and

the Ethernet transceiver circuitry transmitting data to the communication device at the second rate.

50.   (Amended) The semiconductor component of claim 48, further comprising a protocol that governs communication over the wired Ethernet link, and the protocol being based on IEEE 802.3-2000.

51.   (Amended) The semiconductor component of claim 50, wherein the operation of the semiconductor component [first advertisement and the second advertisement] does not conflict with IEEE 802.3-2000.

63.   (Amended) A semiconductor component that communicates via a wired Ethernet link with a communication device supporting two or more communication rates, the semiconductor component comprising:

Ethernet transmitter circuitry that supports communication at a plurality of rates;

Ethernet receiver circuitry that supports communication at the plurality of rates;

auto negotiation circuitry that produces a first advertisement comprising a first indication of at least one of the plurality of rates;

the Ethernet transmitter circuitry sending the first advertisement to the communication device;

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the Ethernet receiver circuitry receiving an indication of the two or more communication rates of the communication device;

the Ethernet transmitter circuitry and the Ethernet receiver circuitry attempting and failing to establish a communication link at a first rate that conforms to the first advertisement and the two or more communication rates of the communication device;

the auto negotiation circuitry producing a second advertisement comprising a second indication of at least one of the plurality of rates, the second indication differing from the first indication;

the Ethernet transmitter sending the second advertisement to the communication device upon a failure in establishing the communication link at the first rate; [and]

the Ethernet transmitter circuitry and the Ethernet receiver circuitry [attempt to] establishing a communication link at a second rate that conforms to the second advertisement and the two or more communication rates of the communication device; and

the Ethernet transmitter circuitry and the Ethernet receiver circuitry communicating data with the communication device.

65   (Amended) The semiconductor component of claim 63, further comprising a protocol that governs communication over the wired Ethernet link, and the protocol being based on IEEE 802.3-2000.

66.   (Amended) The semiconductor component of claim 65, wherein the first advertisement and the second advertisement do not conflict with IEEE 802.3-2000.

81.   (Amended) A semiconductor component that communicates via a wired Ethernet link with a communication device supporting two or more rates, the semiconductor component comprising:

Ethernet transmitter circuitry that supports communication at a plurality of rates;

Ethernet receiver circuitry that supports communication at the plurality of rates;

auto negotiation circuitry that produces a first indication that identifies the plurality of rates;

the Ethernet transmitter circuitry sending the first indication to the communication device via the wired Ethernet link;

the Ethernet transmitter circuitry and the Ethernet receiver circuitry attempting and failing to establish a communication link with the communication device at a first rate consistent with the first indication and having a corresponding counterpart in the two or more rates of the communication device;

the auto negotiation circuitry producing and the Ethernet transmitter circuitry sending a second indication to the communication device upon a failure to establish acceptable communication at the first rate, the second indication identifying at least one of the plurality of rates but not the first rate; [and]

the Ethernet transmitter circuitry and the Ethernet receiver circuitry [attempt to] establishing a communication link with the communication device at a second rate consistent with the second indication and having a corresponding counterpart in the two or more rates of the communication device; and

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the Ethernet transmitter circuitry and the Ethernet receiver circuitry communicating data with the communication device.

83.   (Amended) The semiconductor component of claim 81, further comprising a protocol that governs communication over the wired Ethernet link, and the protocol being based on IEEE 802.3-2000.

84.   (Amended) The semiconductor component of claim 83, wherein the operation of the semiconductor component [first advertisement and the second advertisement] does not conflict with IEEE 802.3-2000.

96.   (Amended) A wired Ethernet communication system comprising:

a first Ethernet communication device that supports communication at a plurality of rates;

a second Ethernet communication device coupled to the first Ethernet communication device via a wired Ethernet link and supporting two or more communication rates;

the first Ethernet communication device producing a first advertisement comprising a first indication of at least one of the plurality of rates;

the first Ethernet communication device sending the first advertisement to the second Ethernet communication device;

the first Ethernet device and the second Ethernet device attempting and failing to establish a communication link at a first rate that conforms to the first advertisement, the

first rate having a corresponding counterpart in the two or more communication rates of the communication device;

the first Ethernet communication device producing a second advertisement comprising a second indication of at least one of the plurality of rates, the second indication differing from the first indication, the second advertisement constructed based upon a result of the attempt to establish a communication link at the first rate;

the first Ethernet device sending the second advertisement to the second Ethernet device upon a failure to establish acceptable communication at the first rate; [and]

the first Ethernet device and the second Ethernet device [attempt to] establishing a communication link at a second rate that conforms to the second advertisement, the second rate having a corresponding counterpart in the two or more communication rates of the communication device; and

the first Ethernet device and the second Ethernet device exchanging data via the communication link at the second rate .

98.   (Amended) The wired Ethernet communication system of claim 96, further comprising a protocol that governs communication over the wired Ethernet link, and the protocol being based on IEEE 802.3-2000.

99.   (Amended) The wired Ethernet communication system of claim 98, wherein the first advertisement and the second advertisement do not conflict with IEEE 802.3-2000.

114.   (Amended) A wired Ethernet communication system comprising:

a first Ethernet communication device that supports communication at a plurality of rates;

a second Ethernet communication device coupled to the first Ethernet communication device via a wired Ethernet link and supporting two or more communication rates;

the first Ethernet communication device producing a first indication that identifies the plurality of rates;

the first Ethernet communication device sending the first indication to the second communication device via the wired Ethernet link;

the first Ethernet communication device and the second Ethernet communication device attempting and failing to establish a communication link at a first rate consistent with the first indication and having a corresponding counterpart in the two or more rates of the communication device;

the first Ethernet communication device producing and sending a second indication to the second Ethernet communication device upon a failure to establish acceptable communication at the first rate, the second indication identifying at least one of the plurality of rates but not the first rate; [and]

the first Ethernet communication device and the second Ethernet communication device [attempt to] establishing a communication link at a second rate consistent with the second indication and having a corresponding counterpart in the two or more rates of the communication device; and

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the first Ethernet communication device and the second Ethernet communication device exchanging data on the established communication link at the second rate.

116. (Amended) The wired Ethernet communication system of claim 114, further comprising a protocol that governs communication over the wired Ethernet link, and the protocol being based on IEEE 802.3-2000.

117. (Amended) The wired Ethernet communication system of claim 116, wherein the operation of the wired Ethernet communication system [first advertisement and the second advertisement] does not conflict with IEEE 802.3-2000.